

Mosquito Management

P R O G R A M

West Nile Virus

Personal Protection Against Mosquitoes Using Repellents

State of
CONNECTICUT

June 2001

The State's mosquito monitoring and management program is a collaborative effort involving the Department of Environmental Protection (DEP), the Department of Public Health (DPH), the Connecticut Agricultural Experiment Station (CAES), the Department of Agriculture (DoAg) and the University of Connecticut Department of Pathobiology and Veterinary Science (UCONN). The program is coordinated by the Department of Environmental Protection.

Personal Protection Using Repellents Containing DEET

The chemical DEET — N,N-diethyl-meta-toluamide — is the most widely used insect repellent in the country. It can reduce the risk of mosquito and tick bites, but products containing DEET must be used properly.

How should repellents containing DEET be used?

- Read and follow the instructions on the label. Avoid over-application.
- For most people (casual use), a high concentration of DEET is not needed.
- Products with 10% to 35% DEET will provide adequate protection under most conditions.
- Use just enough repellent to cover exposed skin and/or clothing.
- After returning indoors, wash treated skin with soap and water.
- Wash treated clothing before wearing again.
- Do not spray directly on face, spray into hands and then apply to face.
- Do not apply over cuts, wounds, or irritated skin.
- Do not use under clothing.
- Do not spray DEET-containing products in enclosed areas.

Use caution when using repellents containing DEET on children.

According to the American Academy of Pediatrics, repellents used on children should not contain more than 10% DEET.

- Dress children in long sleeves and pants and, when possible, apply repellent to clothing rather than skin.
- Do not apply on hands or near eyes and mouth of young children.
- Do not allow children to apply repellents themselves.
- After returning indoors, wash any treated skin with soap and water.



Will using repellents containing DEET affect my health?

DEET has been used for more than 40 years by millions of people worldwide. Products containing DEET have been occasionally associated with some health problems such as skin reactions, including rash, swelling, itching, and eye irritation. In very rare circumstances, slurred speech, confusion and seizures have been associated with the use of DEET, particularly in children. The risk of experiencing any adverse health effects is reduced when products containing DEET are used according to label instructions.

What should I do if I have medical questions about DEET?

If you suspect that you or your child are reacting to an insect repellent, discontinue use, wash treated skin, and call your physician. If you feel that it is an emergency, call 911 or your local emergency service. If you go to a doctor or hospital, take the repellent with you.

You and your doctor can get specific medical information about the active ingredients in repellents and other pesticides by calling:

- National Pesticide Telecommunications Network (NPTN) at **1-800-858-7378** from 9:30 a.m. to 7:30 p.m. (Eastern Time) seven days a week or visit NPTN's website at <http://ace.orst.edu/info/nptn/>.
- Information can also be obtained from the Connecticut Poison Control Center, 24-hours a day, 7 days a week at **1-800-343-2722**.

Can I use a repellent that does not contain DEET?

The use of an insect repellent containing DEET is not the only way to reduce the risk of bites from mosquitoes, ticks, and other biting insects that may transmit disease. Other precautions—such as wearing long pants and long-sleeved shirts are important as well.

If you do not want to use a product containing DEET, or your physician advises you to avoid DEET, there are other products that can give you limited protection. These repellents generally use plant-based oils to repel insects. In comparison to DEET-based products, plant-based repellents are generally effective for a shorter time (usually less than 2 hours).

Personal Protection Using Repellents Containing Permethrin

In Connecticut, some people use permethrin on clothing to reduce the risk of getting Lyme disease by preventing tick bites. Permethrin kills ticks on contact. It can be used in addition to DEET as extra protection against ticks and mosquitoes.

Permethrin is a pesticide and exposure should be minimized. Therefore, it should only be used when ticks or mosquitoes are numerous and other protective measures may not suffice.

Permethrin-containing products must be used according to the label instructions. **PERMETHRIN PRODUCTS ARE FOR APPLICATION TO CLOTHING ONLY.**

There are some health concerns associated with the use of permethrin repellents, particularly if the products are not used according to the label instructions. They can cause eye irritation. In addition, animal studies indicate that permethrin may have some cancer causing potential when used in high doses repeatedly over long periods of time.

Before using products containing either DEET or permethrin, other measures to avoid tick or mosquito exposure should be tried first. For example, wear shoes, socks, long pants and long-sleeved shirt when outdoors.

If you find it necessary to use a permethrin-containing product on your clothing, the following recommendations for proper use will minimize the risk of adverse reactions:

- **TREAT CLOTHING ONLY-DO NOT APPLY TO SKIN.** If you accidentally get the product on your skin immediately wash with soap and water.
- Apply to clothing in a well ventilated outdoor area, protected from the wind.
- Only spray permethrin-containing products on the outer surface of clothing and shoes before you put them on - do not apply to clothing while it is being worn.
- Only spray enough product to lightly moisten the outer surface of the fabric causing a slight color change or darkening; do not saturate clothing.
- Read the application instructions carefully and **do not exceed recommended spraying times. Pay special attention while treating socks, trouser cuffs, and shirt cuffs to ensure complete coverage.**
- Hang the treated clothing outdoors and allow to dry for at least 2 hours (4 hours under humid conditions) before wearing.
- Do not treat clothing more than once every two weeks. Launder treated clothing, separately from other clothing, at least once before retreating.

Permethrin treated clothing can remain effective for 2 weeks or more. Treated clothing should only be worn when needed and then placed in a separate bag when not in use.

For additional information about DEET or Permethrin.

Contact the Connecticut Department of Public Health, Division of Environmental Epidemiology and Occupational Health at **(860) 509-7742**.

Mosquito Management Program Information:

Department of Environmental Protection

Website- <http://dep.state.ct.us>

Toll free at 1-866-WNV-LINE or

(860) 424-4184 - *Latest information on test results, spray locations, protective measures.*

(860) 642-7630 - *Technical questions regarding mosquitoes, mosquito control measures.*

Connecticut Agricultural Experiment Station

Website – <http://www.caes.state.ct.us>

(203) 974-8500 - *Mosquito trapping and testing.*

Department of Public Health

Website – <http://www.dph.state.ct.us>

(860) 509-7994 - *WNV infections in people and wild birds.*

(860) 509-7742 - *Effects of pesticides on people.*

Department of Agriculture

Website – <http://www.state.ct.us/doag>

(860) 713-2505 - *WNV infections in domestic animals, including livestock, poultry, and pets.*

University of Connecticut Department of Pathobiology and Veterinary Science

Website – <http://www.canr.uconn.edu/patho/dts.htm>

(860) 486-3738 - *Necropsy, tissue sample prep and testing for WNV infections in domestic animals, including livestock, poultry, horses, and pets. Necropsy and tissue prep for wild birds.*

This brochure was written by the Connecticut Department of Public Health, Division of Environmental Epidemiology and Occupational Health for the Mosquito Management Program.



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